

# SEQUENCE LISTING

<110> KYOWA HAKKO KOGYO CO., LTD.

<120> Beta 1,3-galactosyltransferase and DNA encoding the same

<130> 11328

<150> JP 2001-392

<151> 2001-1-5

<160> 8

<170> Patent In Ver. 2.0

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Phe Leu Thr Glu Tyr Ser Val Val Asp Asn Arg Ile Lys Ile Leu Leu  
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Ser Ser Ser Leu Phe Phe Ile Ser Lys Asn Ser Phe Thr Thr Thr Arg  
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Ile Leu Asp Ser Ser Glu Lys Asp Cys Tyr Asp Leu Lys His Asn Ser	
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Leu Arg Ile Ile Asn Lys Asp Ala Leu Thr Ser Glu Leu Thr Cys Leu	
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Thr Val Asp Gln Ala Phe Ile Asn Ile Pro Ile Glu Leu Phe Gly Lys	
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160 165 170	
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Pro Thr Val Asp Glu Tyr Glu Lys Tyr Asn Ser Thr Gln Lys Arg Arg			
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385	390		
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Met Lys Ile Cys Leu Val Gly Ser Ser Gly Gly His Leu Ala			
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Val Thr Phe Asp Lys Glu Asp Ala Arg Ser Ile Leu Arg Glu Glu Ile			
425	430	435	
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Val	Ile	Ile	Ser	Ser	Gly	Ala	Ala	Val	Ala	Val	Pro	Phe	Phe	Tyr	Ile	
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Ile	Asp	Lys	Pro	Thr	Leu	Thr	Gly	Lys	Leu	Val	Tyr	Pro	Val	Thr	Asp	
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Lys	Phe	Ile	Val	Gln	Trp	Glu	Glu	Met	Lys	Lys	Val	Tyr	Pro	Lys	Ala	
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His	Glu	Gln	Gln	Phe	Asn	Arg	Leu	Ile	Lys	Glu	Val	Asp	Arg	Leu	Lys	
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Asp	Phe	Glu	Pro	Gln	Asn	Cys	Gln	Trp	Ser	Lys	Phe	Leu	Ser	Tyr	Asp	
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Asp	Met	Asn	Ser	Tyr	Met	Lys	Glu	Ala	Glu	Ile	Val	Ile	Thr	His	Gly	
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Gly	Pro	Ala	Thr	Phe	Met	Asn	Ala	Val	Ser	Lys	Gly	Lys	Lys	Thr	Ile	
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Phe	Asp	Val	Glu	Asn	Val	Ser	Leu	Phe	Gly	Arg	Asn	Leu	Ile	Gly	Ser	
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Asp	Trp	Ile	Asn	Gly	Met	His	Thr	Gln	Arg	Ala	Met	Ala	Phe	Phe	Glu	
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Tyr	Ser	Asn	Leu	Ile	Ile	Pro	Leu	Thr	Ile	Ile	Thr	Asn	Ile	Tyr	Ile	
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Tyr	Ile	Tyr	Ile	Lys	Gln	Arg	Tyr	Ser	Ser	Gly	Met	Met	Ile	Leu	Gly	
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gct	ctt	ctc	tcc	act	att	ata	cta	ccc	atc	ggg	tct	gga	tct	aga	gct	3412
Ala	Leu	Leu	Ser	Thr	Ile	Ile	Leu	Pro	Ile	Gly	Ser	Gly	Ser	Arg	Ala	
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Phe	Ser	Leu	Tyr	Lys	Asp	Thr	Val	His	Ser	Val	Ile	Thr	Asp	Ser	Leu	
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Lys Gln Ile Leu Val Ser Ile Val Ile Pro Ile Tyr Asn Ser Glu Ala	
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Tyr Leu Lys Glu Cys Val Gln Ser Val Leu Gln Gln Thr His Ser Leu	
1100 1105 1110	
ata gaa gtt ata ctg att aat gat gga tcc act gat aat agt gga gaa	4131
Ile Glu Val Ile Leu Ile Asn Asp Gly Ser Thr Asp Asn Ser Gly Glu	
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Lys Lys Asn Gly Gly Val Ser Ser Ala Arg Asn Leu Gly Leu Asp Lys	
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gat ata gaa gaa gta gat ttt gat att tcg aat gag aga gat tat aga	4371
Asp Ile Ala Glu Val Asp Phe Asp Ile Ser Asn Glu Arg Asp Tyr Arg	
1195 1200 1205	
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Lys Lys Lys Arg Arg Asn Phe Tyr Lys Val Phe Lys Asn Asn Asn Ser	
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1245 1250 1255	
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Leu Lys Ile Gly Glu Asp Leu Leu Phe Asn Cys Lys Ile Leu Cys Gln	
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gag cac tgc ata gtc gta gat acg act tct tcc ttg tac acc tat cgc	4611
Glu His Cys Ile Val Val Asp Thr Thr Ser Ser Leu Tyr Thr Tyr Arg	
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Ile Val Lys Thr Ser Ala Met Asn Gln Glu Phe Asn Glu Asn Ser Leu	
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Lys Gln			
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Met Asn Tyr Ser Ile Ile Met Ser Val Tyr Asn Glu Pro Leu Asn			
1405	1410	1415	
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Tyr Val Arg Asp Ser Val Glu Ser Ile Leu Asn Gln Thr Leu Thr Asp			
1420	1425	1430	
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Phe Glu Phe Ile Ile Val Ile Asp Asn Pro Ser Arg Gly Asp Leu Lys			
1435	1440	1445	1450
caa ttc tta aca gaa tat tca gtt gta gat aat aga ata aaa atc ttg			5197
Gln Phe Leu Thr Glu Tyr Ser Val Val Asp Asn Arg Ile Lys Ile Leu			
1455	1460	1465	
ctt aat gaa gaa aat att ggt tta gca tca agt ttg aac aaa gcg gtg			5245
Leu Asn Glu Glu Asn Ile Gly Leu Ala Ser Ser Leu Asn Lys Ala Val			
1470	1475	1480	
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Lys Ile Ser Lys Gly Glu Tyr Ile Phe Arg Met Asp Ala Asp Asp Ile			
1485	1490	1495	
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Ser Tyr Pro Ser Arg Phe Asp Lys Gln Ile Arg Phe Met Glu Glu Asn			
1500	1505	1510	
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Ser Leu Asp Phe Ser Ala Thr Leu Ile Glu Leu Ile Asp Gln Lys Gly			
1515	1520	1525	1530
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Asn Leu Val Tyr Lys Gln Arg Glu Ser Asn Lys Ile Tyr Leu Thr Asn			



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27

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